

REMARKS/ARGUMENTS

Claim 1 recites a filter coupled to a pipeline resource to select at least one entry of a pipeline resource to be flushed and that causes one address space in the pipeline resource to be flushed while other address spaces are maintained. U.S. Patent No. 5,230,045 (Sindhu), over which claim 1 stands rejected as anticipated, nowhere teaches or suggests such a filter coupled to a pipeline resource and thus reconsideration is respectfully requested. As to Sindhu, the Office Action indicates that map cache 58 is the recited pipeline resource. However, Sindhu nowhere teaches a filter coupled to this map cache to cause one address space to be flushed while others are maintained. That is, while Sindhu teaches that several operations are available to flush entries from map cache 58, there is no teaching or suggestion to enable these operations with a filter. Instead, these commands are sent directly to map cache 58.

The Office Action contends that the recited filter is somehow met by equating matching with a filter, referring to column 16, lines 3-14 of Sindhu. Office Action, p. 9. However, all that this portion of Sindhu teaches is as follows:

When map cache 58 receives a FlushEntry command with an AID and VP, central control 118 causes the AID and VP to be loaded into AID register 128 and VP register 130, after which a match is attempted in AID-VP CAM 142. If a match is found, the matching entry's valid bit in CAM control 164 is cleared. If there is no match, FlushEntry has no effect.

FlushSpace is similar to FlushEntry, except that there may be more than one match, since only an AID is received, the bits of the VP being designated by central control 118 as "don't care". The valid bit of each of the matching entries, if any, is cleared.

Sindhu, Col. 16, lns. 3-14.

These operations, which appear to be instructions, act to flush relevant parts of the map cache. However, this fails to disclose the recited subject matter, namely a filter coupled to a pipeline resource to select at least one entry to be flushed, and to cause one address space to be flushed while others are maintained. Instead, Sindhu simply teaches the presence of these instructions. As the art fails to disclose at least the recited filter element of claim 1, the rejection is overcome and the claim is patentable.

For at least similar reasons, the claims depending from claim 1 are also patentable, including dependent claims 34-37. As contended support for the rejection of each of these claims, the Office Action simply recites the same support described above regarding claim 1, in addition to lines 65-67 of column 15, reproduced below. Office Action, p. 4.

Several flush operations are desirable, to flush an entry (FlushEntry), to flush entries from a specific address space (FlushSpace) and to flush all entries (FlushCache). Each of these operations deletes one or more entries from AID-VP CAM 142 and RP-Flags RAM 146.

Sindhu, col. 15, Ins. 65-68 – col. 16, Ins. 1-2.

None of this, however, anywhere teaches or suggests the recited filter of claim 34, which is to store multiple filter entries each including a pair of valid indicators and a thread identifier, *inter alia*. Certainly, Sindhu fails to teach the recited operation of these valid indicators set forth in claim 35. Nor is there any teaching or suggestion of the recited control register with an entry for each entry of the filter, as set forth in claim 36. Finally, with regard to claim 37, there is no teaching or suggestion in Sindhu of a post-retirement store address.

It is noted that dependent claims 38-42, which generally recited similar subject matter as dependent claims 34-37, also stand rejected under 35 U.S.C. § 102(e) over Sindhu. However, independent claim 16, from which these claims depend, does not stand rejected under Sindhu. As the Office Action fails to set forth a *prima facie* case of anticipation as to claim 16 with regard to Sindhu, the rejection of these dependent claims is improper for this reason alone. These claims 38-42 are further patentable for the same reasons described above for claims 34-37. It is further noted that claim 17, which depends from independent claim 16 similarly stands rejected on Sindhu. For the same reason, this rejection is also improper.

As to claim 20, the Office Action makes no attempt to map the recited subject matter of the claim to Sindhu. Instead, the Office Action simply refers to the same subject matter of claim 1, which is an entirely different claim than claim 20. Office Action, p. 2. As the Office Action nowhere sets forth any basis for contending that Sindhu contains the recited subject matter of claim 20, this rejection is overcome. Nevertheless, for purposes of full explanation, Sindhu nowhere teaches or suggests storing a value and an address space identifier in both an entry of a pipeline resource and an entry of a filter coupled to the pipeline resource, as set forth in claim 20. As described above, Sindhu fails to teach this filter. This art further fails to teach or suggest receiving an address space identifier and an address from a senior store or snoop and determining whether such values match an entry in this filter, as also recited in claim 20. Accordingly, claim 20 and the claims depending therefrom are patentable over the cited art.

Claims 16 and 17 stand rejected under 35 U.S.C. § 102(e) over U.S. Publication No. 2004/0193778 (Ishikawa). Applicants respectfully traverse the rejection, as a *prima facie* case of

anticipation has not been made. In this regard, the Office Action fails to make any mention of the recited filter of claim 16, and certainly, there is no such filter present in Ishikawa. As such, the rejection cannot stand and is overcome.

In view of these remarks, the application is now in condition for allowance and the Examiner's prompt action in accordance therewith is respectfully requested. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504.

Respectfully submitted,

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Mark J. Rozman
Registration No. 42,117
TROP, PRUNER & HU, P.C.
1616 S. Voss Road, Suite 750
Houston, Texas 77057-2631
(512) 418-9944 [Phone]
(713) 468-8883 [Fax]
Customer No.: 21906